

SAND CUSHION TERRAZZO

PART 1 – GENERAL

1.01 SUMMARY

- A. Minimum of 2-1/2 inch thick (1/2" nominal terrazzo topping, 2" nominal underbed, with isolation membrane, reinforcing mesh and dusting of sand on concrete substrate.)
- B. Work included in this Section
 - 1. Portland Cement Sand Cushion terrazzo, horizontal surfaces.
 - 2. Underbed, Portland Cement base.
- C. Related work in other Sections
 - 1. Furnish and installation of concrete slab with moisture vapor barrier.
 - 2. Furnish and setting of floor drains.
 - 3. Metal lath and Portland Cement plaster.
 - 4. Joint sealants installed with terrazzo.
 - 5. Sufficient water, temporary heat and light, and adequate electric power connected with outlets within 100 feet of work area.

1.02 QUALITY ASSURANCE

- A. Acceptable suppliers
 - 1. Suppliers shall be Associate members of the NTMA and shall supply materials in accordance with the standards and specification of the NTMA.
 - 2. Marble chips and/or glass aggregates shall be standard colors and gradated sizes as supplied by United Terrazzo Supply, La Mirada, CA.
- B. Acceptable installers
 - 1. Terrazzo installation contractor shall be current Contractor members of the NTMA and shall perform all work in accordance with NTMA specifications and standards.

1.03 SUBMITTALS

- A. Product Data
 - 1. Submit product data for all related materials including divider strips, expansion strips, membranes, sealers and cleaners.
- B. Samples
 - 1. Submit (3) 6" square samples for each color and type of terrazzo specified or selected.
 - 2. Submit (3) 6" lengths of each divider of expansion strip required.
- C. Certification
 - 1. Submit certification letter from NTMA that terrazzo installation contractor is current member in good standing of the NTMA.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Delivery of materials
 - 1. Deliver materials in a manner to prevent damage or contamination to containers or bags of materials.
- B. Storage of materials
 - 1. Store materials in a clean, dry location, heated to minimum 50 degrees, furnished by others.

1.05 Guarantee/Warranty

- A. Terrazzo materials and installation shall be guaranteed for a period of (1) year from date of substantial completion. Guarantee shall be limited to the repair and/or replacement of materials or workmanship found to be defective per NTMA standards and specifications.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Portland Cement: ASTM C150.
- B. Sand: Clean, washed, locally available sand.
- C. Marble Chips; As distributed by United Terrazzo Supply, Size_____ (per NTMA gradation standards).
- D. Divider Strips; Zinc, _____" in thickness.
- E. Colorants: Alkali resistant color stable pigments per NTMA Design Guide Standards.
- F. Reinforcement: ASTM A185 18 gauge galvanized welded wire mesh.
- G. Isolation Membrane: ASTM D 2103, 4 mil polyethylene sheeting.
- H. Terrazzo Cleaner: PH Factor between 7 and 10, biodegradable and phosphate free.
- I. Sealer: TESCO Crystalseal penetrating sealer.

2.02 MIXES

- A. Terrazzo Selection:
 - 1. Terrazzo type shall be Sand Cushion Terrazzo.
 - 2. Color shall be NTMA color plate or custom matrix as selected by designer.
- B. Proportion:
 - 1. Underbed: One part Portland Cement to four parts sand and sufficient water to provide workability at as low a slump as possible.
 - 2. Terrazzo Topping: One 94 pound bag of Portland cement per 200-200 pounds of marble chips, color pigment if required and sufficient potable water to produce a workable mix.
- C. Mixing:
 - 1. Underbed: Charge and mix sand and Portland Cement, add water and mix.
 - 2. Terrazzo Topping: Charge and mix marble chips, Portland cement and color pigment if required. Add water and mix to a uniform workable consistency.

PART 3 – EXECUTION

3.01 INSPECTION

Examine areas to receive terrazzo for:

- 1. Defects in existing work that affect proper execution of terrazzo work. Notify contractor of any defects in concrete or other related work for correction.
- 2. Start only when all defects have been corrected by others.

3.02 INSTALLATION

- A. Underbed:
 - 1. Cover entire surface to receive terrazzo with dusting of sand.
 - 2. Install isolation membrane overlapping ends and edges a minimum of 3 inches.
 - 3. Install welded wire reinforcement, overlapping edges a minimum of 3 inches.
 - 4. Place underbed mix.
 - 5. Screed underbed to elevation ½" below finished floor elevation.

6. Install divider strips per approved layout in semi-plastic underbed and trowel along edges.
 7. Install control joint strips if required, taking care that control joint is full depth of underbed.
- B. Placing Terrazzo:
1. Saturate underbed with water.
 2. Place terrazzo mixture in panels formed by divider strips and trowel mixture to top of strips.
 3. Seeding of additional chips is optional.
 4. Roll and compact surface until all excess cement and water have been extracted.
 5. Trowel to a dense uniform flat surface disclosing lines of divider strips.
- C. Curing:
1. After completing placement of terrazzo and composition has sufficiently set, cover with water, wet sand or polyethylene sheeting.
 2. Cure until topping develops sufficient strength to prevent lifting or pulling of terrazzo chips during grinding.
- D. Finishing:
1. Rough Grinding:
 - a. Grind with #24 or finer grit stones or with comparable diamond plates
 - b. Follow initial grind with #80 or finer grit stones.
 2. Grouting:
 1. Cleanse floor with clean water and rinse
 2. Remove excess rinse water and machine or hand-apply grout, taking care to fill voids.
 3. Grout may be left on terrazzo until all heavy or messy work in project is complete.
 3. Fine Grinding:
 - a. Grind with #80 or finer stones until all grout is removed from surface.
 - b. Upon completion, terrazzo shall show a minimum of 70% marble chips.
- E. Cleaning and Sealing:
1. Wash all surfaces with a neutral cleaner.
 2. Rinse with clean water and allow surface to dry.
 3. Apply TESCO Crystalseal penetrating sealer in accordance with manufacturer's directions.
- F. Protection:
- Upon completion, the work shall be ready for final inspection and acceptance by owner or agent. The General Contractor shall protect the finished floor upon completion.